ELSEVIER

Bioenergetics
(including Reviews on Bioenergetics)
Vol. 1411, 1999

BIOCHIMICA ET BIOPHYSICA ACTA
BBA

Cumulative Contents

Information for Contributors vii

Reviews

Femtosecond processes in proteins
M.H. Vos and J.-L. Martin (France) 1

The biogenesis and assembly of photosynthetic proteins in thylakoid membranes
F.-A. Wollman, L. Minai and R. Nechushtai (France, Israel) 21

Minireview

Photosynthetic water oxidation: a simplex-scheme of its partial reactions
M. Haumann and W. Junge (Germany) 86

Regular papers

Fractionation of the thylakoid membranes from tobacco. A tentative isolation of 'end membrane' and purified 'stroma lamellae' membranes
R. Gadjieva, F. Mamedov and P.-Å. Albertsson (Sweden) 92

Density functional calculated spin densities and hyperfine couplings for hydrogen bonded 1,4-naphthosemiquinone and phyllosemiquinone anion radicals: a model for the A_1 free radical formed in Photosystem I
P.J. O'Malley (UK) 101

Heterologous expression of soluble fragments of cytochrome c_{552} acting as electron donor to the *Paracoccus denitrificans* cytochrome *c* oxidase
B. Reincke, L. Thöny-Meyer, C. Dannehl, A. Odenwald, M. Aidim, H. Witt, H. Rüterjans and B. Ludwig (Germany, Switzerland) 114

Evidence for impaired hydrogen-bonding of tyrosine Y_Z in calcium-depleted Photosystem II
M. Haumann and W. Junge (Germany) 121

The unusual iron sulfur composition of the *Acidianus ambivalens* succinate dehydrogenase complex
C.M. Gomes, R.S. Lemos, M. Teixeira, A. Kletzin, H. Huber, K.O. Stetter, G. Schäfer and S. Anemüller (Germany, Portugal) 134

Characterisation of the last Fe-S cluster-binding subunit of *Neurospora crassa* complex I
R. Sousa, B. Barquera, M. Duarte, M. Finel and A. Videira (Finland, Portugal) 142

Gene structure and quinol oxidase activity of a cytochrome *bd*-type oxidase from *Bacillus stearothermophilus*
J. Sakamoto, E. Koga, T. Mizuta, C. Sato, S. Noguchi and N. Sone (Japan) 147

A catalytically active complex formed from the recombinant dI protein of *Rhodospirillum rubrum* transhydrogenase, and the recombinant dIII protein of the human enzyme
S.J. Peake, J.D. Venning and J.B. Jackson (UK) 159

The *Saccharomyces cerevisiae* succinate dehydrogenase anchor subunit, Sdh4p: mutations at the C-terminal Lys-132 perturb the hydrophobic domain
K.S. Oyedotun and B.D. Lemire (Canada) 170

The role of cytochrome b_{559} and tyrosine$_D$ in protection against photoinhibition during in vivo photoactivation of Photosystem II
A. Magnuson, M. Rova, F. Mamedov, P.-O. Fredriksson and S. Styring (Sweden) 180

Thyroid hormone status and membrane *n*-3 fatty acid content influence mitochondrial proton leak
D.J. Pehowich (Canada) 192

Rapid reports

Cardioselective and cumulative oxidation of mitochondrial DNA following subchronic doxorubicin administration
J. Serrano, C.M. Palmeira, D.W. Kuehl and K.B. Wallace (Portugal, USA) 201

Characterization of the photoreduction of the secondary quinone Q_B in the photosynthetic reaction center from *Rhodobacter capsulatus* with FTIR spectroscopy
E. Nabedryk (France) 206

Information for Contributors ix

Introduction and Overview

Biochemistry of nitric oxide
C.E. Cooper (UK) 215

Reviews

Nitric Oxide Synthesis and Breakdown

Mammalian nitric oxide synthases
D.J. Stuehr (USA) 217
Bacterial nitric oxide synthesis
F. Cutruzzolà (Italy) 231
Non-enzymatic nitric oxide synthesis in biological systems
J.L. Zweier, A. Samouilov and P. Kuppusamy (USA) 250
Relationships between nitric oxide, nitroxyl ion, nitrosonium cation and peroxynitrite
M.N. Hughes (UK) 263
Nitric oxide metabolism and breakdown
M. Kelm (Germany) 273

Nitric Oxide Targets

Nitric oxide and iron proteins
C.E. Cooper (UK) 290
The reactions of copper proteins with nitric oxide
J. Torres and M.T. Wilson (UK) 310
Nitric oxide and thiol groups
B. Gaston (USA) 323
Guanylate cyclase and the ˙NO/cGMP signaling pathway
J.W. Denninger and M.A. Marletta (USA) 334
Nitric oxide and mitochondrial respiration
G.C. Brown (UK) 351
Nitric oxide and hemoglobin interactions in the vasculature
H. Kosaka (Japan) 370
Nitric oxide and lipid peroxidation
N. Hogg and B. Kalyanaraman (USA) 378
Biological aspects of reactive nitrogen species
R.P. Patel, J. McAndrew, H. Sellak, C.R. White, H. Jo, B.A. Freeman and V.M. Darley-Usmar (USA) 385

Nitric Oxide, Medical Aspects

Nitric oxide and cell death
M.P. Murphy (New Zealand) 401
Roles of nitric oxide in brain hypoxia-ischemia
J.P. Bolaños and A. Almeida (Spain) 415
Nitric oxide in septic shock
M.A. Titheradge (UK) 437

Nitric Oxide in the Biosphere

Nitric oxide in bacteria: synthesis and consumption
N.J. Watmough, G. Butland, M.R. Cheesman, J.W.B. Moir, D.J. Richardson and S. Spiro (UK) 456
Nitrite and nitrosyl compounds in food preservation
R. Cammack, C.L. Joannou, X.-Y. Cui, C. Torres Martinez, S.R. Maraj and M.N. Hughes (UK) 475

Cumulative Contents, Vol. 1411 489

Author Index 491